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Updating Census Information for Local Government Use

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An Information Bulletin of
the Community and Economic
Development Task Force
of the

URBAN
CONSORTIUM

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UPDATING CENSUS INFORMATION FOR LOCAL GOVERNMENT USE

An Information Bulletin of the
Community and Economic Development Task Force of the
URBAN CONSORTIUM

Supported by

U. S. Department of Housing and Urban Development
Office of Policy Development and Research
Washington, D. C.

Prepared by

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PREFACE

The Urban Consortium is a coalition of 34 major urban governments working together with federal officials and private industry to encourage the development and transfer of products and systems which will address pressing urban problems. To accomplish its goal, the Consortium works through a group of Task Forces to systematically identify the common needs of its members, establish priorities, develop research and development (R&D) agenda, and stimulate public and private investment to support the R&D priorities.

An important underlying concept of the Urban Consortium is that meaningful local participation in federal research programs will help assure that R&D efforts are directly responsive to the most critical local government problems and that successful solutions will be actually utilized. The Consortium provides local officials with a structured means of cooperatively working with the national research community. As such, it represents an innovative and coordinated problem-solving effort for America's major urban jurisdictions.

To date, the Community and Economic Development Task Force has been one of the Consortium's most active components. This Task Force consists of senior-level local government officials with broad experience and expertise in the subject area. It has engaged in a systematic process to identify priority R&D need topics, investigate each topic, and develop an overall R&D agenda and specific research initiatives in community and economic development.

This Information Bulletin is one of a series of reports developed by the Community and Economic Development Task Force. Each Bulletin covers a priority need topic and is designed to serve two purposes. First, it provides the members of the Task Force with a common information base from which an overall R&D agenda and specific research initiatives can be developed. Second, it provides the Department of Housing and Urban Development, local government officials and others with a general statement of a priority need area.

Each Bulletin provides a brief overview of current issues and problems surrounding the specific need topic, a description of some current activities underway to address the need, a discussion of potential research initiatives and a listing of information resources on the topic.

In addition to this Bulletin on Updating Census Information For Local Government Use, Bulletins have also been prepared on the following topics:

- Residential Abandonment in Central Cities
- Business Retention
- Inhibiting Effects of Codes on Low and Moderate Income Housing
- Disinvestment in Urban Neighborhoods
- Recycling of Obsolete Buildings

There are two priority need areas where the Community and Economic Development Task Force has decided to initiate research efforts. Research Initiative Reports have been prepared on these two topics:

- Neighborhood Resource Allocation Strategies
- Land Use Information Systems Transfer

An overview report, Community and Economic Development Needs Summary describes the overall process which the Task Force used in identifying, analyzing and prioritizing urban research and development needs in community and economic development.

The work of the Community and Economic Development Task Force and the preparation of all Task Force reports has been supported by the U. S. Department of Housing and Urban Development, Office of Policy Development and Research under contract #H-2357. The overall program of the Urban Consortium is supported by the National Science Foundation/Research Applied to National Needs.

Public Technology, Inc. (PTI) serves as Secretariat to the Urban Consortium and provides all staff support to the Consortium and its Task Forces. PTI is a non-profit organization that functions as the research and development arm of local and state governments. It was established in 1971 by the major public interest groups representing state and local governments. The executive directors of these groups comprise the Board of Directors of PTI.

The U. S. Department of Housing and Urban Development representatives are Alan Siegel, Director, Division of Community Development and Management Research, Office of Policy Development and Research, and Nancy Steetle, Special Assistant, Office of the Assistant Secretary for Community Development and Planning.

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I. THE PROBLEM/NEED BACKGROUND

The Problem Statement

Local government officials have a common need for current statistics on population, housing and other census-type information. The most important source of such statistics is the decennial census. However, the ten-year gap between federal censuses often makes this data inadequate for local purposes. Available techniques and resources for updating census information at the local level are frequently quite limited.

The dynamics of urban population change, the substantial resources required to collect new data, and the magnitude of financial risk associated with faulty program judgements makes the problem of "census updating" a particular concern to officials of large urban governments. These officials give a priority rating to their need for more current information. Such information is needed to make broad decisions about resource allocation and to manage on-going programs (e.g., manpower, education, social services and community development). There is a particular need for detailed information on certain segments of the population (e.g., minorities, the economically-disadvantaged, school population, the elderly) and subareas within the jurisdiction (e.g., census tracts, neighborhoods, blocks). Of special concern is the direction and rate of change in population and housing, for the jurisdiction as a whole and especially for its subareas. Beyond these local needs, there is a federally imposed need for acceptable updated and often quite detailed information on population and housing to meet requirements for participation in federal programs. Lack of current appropriate information is seen by local officials as leading to "decisions about urban development being made in an information vacuum", to "illogical distribution of facilities and services", loss in revenues from federal and state programs, and failure to monitor the direction which the community is moving so that appropriate action can be taken.

Discussion with practitioners at different levels of government suggests a broader framework for analyzing the problem than just available techniques for updating the census. The problem seems to have four important components: assessment of demand; review of federal-local interaction; discussion of techniques for up-dating and alternatives to decennial information; and a recognition of the costs involved.

The magnitude and range of demands for statistical information on population and housing as well as the scope of the census itself mandates some analysis of the demands themselves. What types of data are most needed? What is the process for selection of priorities?

The federal government plays a major role in producing, requiring and judging urban statistics. How compatible is this federal-urban relationship? Where do federal statistical requirements parallel local efforts to generate or refine data for local needs and where do they conflict? How well do federally-generated statistics meet local needs? What is the match between federal requirements for data and federal production of data?

The range of demands and the theoretical and functional limitations of methodological approaches to updating census information mean that urban planners must develop and use data other than decennial census data. Urban officials are interested in the experience of other jurisdictions with surrogate or administratively-generated data, with data purchased from commercial firms and with specially-generated data.

And finally, while surveys of local government officials indicate that more information would be useful, there is some doubt expressed by practitioners about the availability of local resources to finance improved data collection. For many jurisdictions, the lack of adequate financing, staff and computer capacity may be as severe a problem as the technical problems of data collection and analysis. In some instances, the scarcity of resources in this area may be attributed to the lack of appreciation of the value of information systems. On the other hand, some observers raise the questions of "whether the cost of more data is worth it".

Background

In a perfect world, a decision-maker would have all the information he needed before taking any action. In the real world of daily decision-making, public officials must often act with incomplete, dated and sometimes biased data.

Advances in the collection, tabulation, storage, and retrieval of data in the 60's and 70's have greatly increased the types and amounts of information potentially available to local officials. These advances have also increased the expectation, and in many instances the legal requirements, that data on population, human need, land use or housing conditions, etc., be used in the allocation of public funds, the determination of program priorities and services, and the placement of public facilities. Attempts to satisfy these expectations and requirements produce great frustration with the quantity of data to be sifted

through, the gaps in data to meet specific need (especially at local levels), and costs of producing, maintaining, and analyzing such data.

Attempts to return decision-making to the local level with the transfer of federal funds to state and local governments have accelerated the demands on such governments to produce particular statistics. The federal government with its justifiable concern that resources be allocated in an equitable, measurable basis often stipulates or mandates the use of particular statistics in program allocation or plans. Local officials find that these statistics are often not available in the form required, or are costly to retrieve or update. As a consequence, numerous activities are occurring at the federal level to increase comparability among statistical series, to generate special statistics, and to support a variety of approaches to statistical collection and analysis.

The decennial census is the single best-accepted source of information on the nation's population and housing characteristics. It is used by a broad population of public officials, private businessmen, and academicians. Its statistics are particularly valued because of the high quality of the data, the continuity in censuses over time, and the comparability of techniques used to generate data from different areas. Technological advances made in the 1970 census made it possible to produce data in greater detail more quickly. It was the first census to provide computerized data for public use. These advances heighten the attractiveness of census materials to planners and other users of small area and specialized statistics.

Many of the decennial census's virtues are also its defects. The requirement for a total enumeration of population makes it a costly and cumbersome operation compared to a sample survey. The need to provide general-purpose statistics for a wide audience means that there are limits on the detail and specialized information it can provide for particular groups of users. The need to insure comparability over time limits its flexibility. The comprehensive nature of the census and the established procedures for generating and producing its statistics delay its availability and defers and limits its usefulness to public officials. The complexity and sheer mass of census data produced makes access, analysis, and use of its statistics a costly and sometimes overwhelming task for local governments. The first-time availability of special census materials on tape, for example, greatly increased the range of statistics available, but use of such materials entailed the purchase of tapes, specialized software and computer capacity. And finally, ironically the census's high quality and comprehensiveness may set a standard that discourages local initiatives, promotes an excessive demand for more and better statistics, and directs research activities at the best rather than the most feasible alternatives in data collection.

Very current decennial census data alone cannot meet all the needs of

urban planners. Change may occur too rapidly, for example, in school age population to make census information sufficient for school administrators. Neighborhood shifts in population or housing patterns often cannot be identified early enough by the use of census data for appropriate intervention at the key point in time. Census data does not include all the information that an urban planner could legitimately require. Certain populations are known to be especially difficult to enumerate and are consistently undercounted (e.g., inner-city, low income and certain minority populations). There are conceptual and practical problems in generating acceptable measures of housing quality, mobility, etc. Some questions of particular interest to urban planners may only be asked of a sample of total population. (e.g., questions on income, years of school completed, employment status, mother tongue, place of work, disability, citizenship, and Mexican and Spanish origin or descent).

These limitations mandate the development of alternative sources of information and data systems. The problem becomes increasingly acute as the time distance from the last census lengthens.

Once a local official has determined what information is most needed and for what purposes, he has basically four choices in dealing with census data:

- Use of available data from the census for some point in past time, under the assumption that there have been no significant changes.

- Substitution of more current data from administrative records or commercial sources, under the assumption that such data is accurate and complete enough for local purposes.

- Updating of census data under the assumption that change in the data is related in some way to change in existing data or special data generated from the analysis of administrative records, commercial information systems or a sample survey. In "updating", the choice ranges from very simple to quite complex mathematical equations.

- Conduct of a new census or special count of the population or characteristics of particular interest.

There is no single best approach to meeting urban needs in general or for obtaining a specific type of information like estimates of total population or household size.

II. MAJOR ISSUES

The Demand for Information

The enormity of the demand for statistical information on a range of topics for a multiplicity of purposes mandates that some system of evaluation and priority-setting be established.

A basic question is whether there exists a uniform urban perspective on the need for both broad categories of information and for specific data elements within these categories. Can the large urban governments agree among themselves on the relative needs for:

- Broad general purpose data which reflects the dynamics of change and identifies trends in population and housing characteristics;
- More comprehensive data on special populations defined by age, economic status or other special condition; and
- Data on small area characteristics.

There is a need to carry the consensus process further and establish common priorities within each broad area. Questions like the following need to be addressed:

- What are the populations of greatest interest? ... The elderly, specific minorities, those of a certain income or some other population.
- What is the most useful way to look at these populations? ... In terms of families, households or individuals.
- What is important to know about these individuals or groups of individuals? ... Their residence, income, education or some other factor.
- Where is the greatest need, and where are present statistical or data systems most lacking? What sorts of statistics or data formats would be more useful and most usable? How accurate and how current must this data be?

If such agreement is possible, what is the best mechanism for establishing and articulating urban priority data needs? Is it through:

- Existing committees and forums within the local government public interest groups.
- Limited surveys of large urban governments.
- A series of workshops or conferences bringing together federal and local officials concerned with the production and application of census type data.
- Some elaborate review process or research initiative.

The Compatibility of Federal and Local Statistical Activities

The Federal government plays a major role in producing, requiring and judging urban statistics. It sets the standard on which most local statistical efforts are modeled.

How compatible a relationship is this? Where do federal and local data interest coincide and where do they conflict? The federal government has a particular interest in comparable general purpose statistics that can be aggregated at the national level. Where does this emphasis improve local statistical activity and where does it encourage statistical activities that are inappropriate at the local level? Where do federal requirements for specific types of information lead to improvements in the analytic capabilities of local governments and where do they divert scarce local resources from more productive efforts? Is it possible for the cities to identify specific federal requirements, which should be re-evaluated in terms of the national and local capacity to meet these demands at any cost proportionate to their current use?

Considerable resources are being expended at the federal level. This is being done to ensure comparability among the statistical measures used to allocate monies among local governments, to generate new statistics and to support research in new methodology. How well are the specific needs of urban jurisdictions reflected in these current statistical programs and research and development activities? If not well, what other resource allocations in the statistical area should be considered? How can urban officials effectively influence these decisions on resource allocations?

Coordination of Federal Statistical Activities

Many urban officials express dismay over the coordination of federal

statistical requirements with federal production of statistics. They cite "the very specific requirements" for updated census materials by the federal government as a major burden. They cite the prospective loss of benefits in federal programs because of dated statistics as a major concern.

Coordination of federal statistical programs is a difficult task. Current organization of federal statistical programs recognizes the specialized needs for information collection by a range of executive agencies and offices. It gives one agency, the Office of Management and Budget (OMB), responsibility for general oversight. A recent OMB organization chart shows five general purpose statistical collection agencies, eight analytic and research agencies, and more than 67 administrative and regulatory agencies which generate statistics and fall underneath the Office's aegis.

The problems of statistical coordination within the federal government have become more relevant to state and local governments under the "new federalism". Federal assistance to state and local government rose from $7 billion in 1960 to an estimated $56 billion in 1976, or almost one-quarter of state and local government expenditures. Federal formula grant-in-aid programs accounted for over 70 percent of this total.

Some 120 of these formula grant programs use population as a factor in allocating funds. Seldom is population the sole determinant. The majority of the funds under these programs are allocated to states rather than local governments. Except in the case of general revenue sharing, funds allocated to a state or local government are not automatically provided to the eligible government. The allotments indicate the total available to the recipient government if specific program regulations, requirements or other criteria are met. Both of these steps, i.e., formula allotments and program requirements for the release of funds, have stimulated demands for specific statistics.

In most cases, the amount of federal funds available for a given program is fixed. An increase in allocation for one jurisdiction means a decrease for another. Increased federal attention has been paid to ensuring comparability in the period of time, methodology, and accuracy of data used to determine distribution of funds.

A related but less discussed issue is that no single agency has the sole responsibility for generating general purpose statistics, for adapting statistical systems to the needs of other units of government or for assisting users of data. The Bureau of the Census has made major efforts to help users of its data. Similarly, HUD has provided assistance with municipal information systems. However, it is not universally accepted that these are roles mandated of either agency.

Methodology and Data Sources

Decisions on methodology and data sources reflect not only evaluation of the types and quality of data available but also trade-offs between the perceived benefit of information and cost of obtaining such information. Often non-demographic considerations such as the weight given to statistical information in local decision-making, interdepartmental patterns of cooperation in data collection and reporting, and the relative resource allocations between administrative and planning activities and program and operational activities determine what is feasible at the local level.

In the discussion below, various options are discussed as separate choices although in reality a statistical office will probably utilize more than one of these options in developing a statistical profile on a geographic area.

Using Data From the Most Recent Census

Data from the last census is chosen when no actual or economically feasible alternatives can be identified. Theoretically, this choice would be made when only slight change in the area under study is believed to have occurred. More practically, this choice is made when alternative data is not available, change in the statistic cannot be accurately related to change in any available or obtainable statistical series, or the cost of generating new information is out of proportion to the value of the information.

Substituting New Data

The decision to substitute new and more current non-censal data is heavily influenced by the availability, completeness, accuracy and cost of obtaining such alternative data. One type of commercially available data, which is widely used, is that developed by R. L. Polk as a by-product of its annual counts for city directories.

Urban officials report frequent substitution of data generated from their administrative records for census data on housing and, less commonly, for estimates of total population or specific populations.

Administratively-generated data can be used in compiling detailed information on special populations measuring the characteristics of subareas of a city, and supplying current evidence of specific change for use in mathematical equations estimating population. One constraint on local use of administratively-generated data relates to the relative ability of the data user to influence the statistical gathering practices of the agency which acts as data collector.

Another constraint is the cost involved in retrieving, correcting, editing and recoding such data. There have been considerable advances in the computer technology available for establishing, maintaining and updating information systems based on a common geocoding framework. One such system, GBF/DIME, was specifically developed by the Census Bureau as a by-product of taking the decennial census by mail. It makes it possible to link computerized census materials with administrative-data on file by address or local administrative unit. Many large urban jurisdictions report problems in utilizing DIME files. Local experience in both manual geocoding and manual use of geo-coded materials suggests that it is possible to use some administrative data without reliance on computer systems.

Population Estimates

Most of the common techniques for estimating population or population change apply to large rather than small areas. This relates to the demographers historic concern with measuring nations and changes within nations. It relates to the format in which most data is generated. It reflects the limits of the mathematical tools.

In general, estimates are better for large geographic areas than for small. Estimates of total population are more accurate than estimates of subpopulations defined by age, sex, race, etc. Estimates for short periods are more reliable than those for longer periods. Implicit in all estimates is the assumption that observable change in one series of statistics can be related to change in another.

In making a post-censal estimate, a statistician has the choice of estimates based on already collected data or of conducting a sample survey. Like the census, sample surveys are relatively expensive and require considerable planning, administration and analysis. Non-survey or analytic estimating techniques usually incur less direct expense but may require elaborate mathematical equations, and reformating or analysis of data collected for other purposes. The repertoire of demographic techniques is most complete for estimates of total population.

Sample surveys provide a method to generate particular information for a designated geographic area at a specific point in time. Choice of the method of conducting the survey (e.g., telephone, mail, direct interview) and of the sample size and design relates to the type of information sought, the time frame, the availability of funds and trained staff, and the population being surveyed. Sample size is more a function of the way data from the survey will be used and the level of accuracy specified, than of the total size of the population from which the sample is drawn.

In general, sampling is most effective for measuring large areas (total cities or major divisions within a city). Sampling errors generally affect smaller numbers to a greater relative degree than large numbers.

Local Censuses

A census or the total count of a given population in a given universe is the most expensive approach. One reason for adopting this approach is the belief that major changes have occurred that cannot be estimated at the required level using a less than 100% sample of the population. Another is to meet legal requirements. A third reason is the need for small area statistics at a level and detail not possible through the use of administrative records. Cost, as in sample surveys, is a function of the size of the population to be interviewed, the breadth and complexity of topics to be covered in the interview, and the method used to reach the target population.

Local Government Needs

A limited review of the available literature on methodology and alternative data sources suggests that there is no single best approach (or source of alternative data) to meeting urban information needs. This is not surprising given the complexity of the demands and the variety of statistics required. Secondly, the best methodology and data sources available seem to be heavily weighted toward those statistics that could be used for large area estimates. And finally, information on methodologies and alternative data systems that could be used below the city level seem to be harder to locate and access. Discussions with those concerned with developing data for large urban governments seem to suggest that they were developing much needed statistics on an ad hoc basis and are particularly interested in the experience of other local government practitioners.

Perhaps an important first step in determining research priorities is to review more comprehensively current research efforts and practices at the local level. A number of large jurisdictions have invested considerable local resources and ingenuity in developing systems, measures and analytic techniques to address common problems.

Such a review could provide the basis for determining from a local government perspective, the relative need for new methodologies or tools for gathering data as opposed to better dissemination of information on existing methodologies and the potential uses of existing data sources.

If the decision were made to invest resources in improved methodology,

such efforts should not only be focused in areas of prime concern to local governments but also should take into account the "real-world" constraints under which local systems operate. This might suggest the need to develop a "cafeteria" approach, which identifies a range of techniques utilizing different data series rather than a single "best" approach to meeting an information need.

Cost Factors

Urban practitioners cite the lack of adequate financing and the lack of adequate staff as a problem equal to or greater than the technical problems of generating or analyzing data. This suggests the need to look again at:

- The appropriateness of local and federal demands for information not currently available;
- The value of additional information in terms of relative resource allocation; and
- The proper roles of federal, state and local governments in determining the information to be collected, in analyzing the information and in bearing the cost of information.

Formula Grant Programs

Grant programs involve the transfer of large amounts of federal funds to state and local governments. These same programs are responsible for escalation in demand for certain statistics. Is there a general problem in program design in the proportion or distribution of administrative funds? Should a portion of these funds be "set aside" for local information systems and the improvement of locally-generated data for planning purposes?

Federal Assistance to Local Governments

And finally, how can the federal government best assist the urban governments? Is it through:

- The reduction of federal demand for locally-developed statistics;
- The direct transfer of funds;
- The provision of trained staff or augmented state or regional facilities;
- The assumption of increased responsibility for generating specific

statistics;

- The development and testing of new methodologies;

- The dissemination of computer programs or handbooks to increase local capacity to identify and use already available data.

What are the urban priorities and what is politically feasible? What federal agency or agencies should assume these responsibilities?

III. CURRENT APPROACHES

Federal Activities

Efforts to Ensure the Use of Comparable Statistics in Formula Allocations

The Office of Management and Budget mandates that certain specified statistics on total population, unemployment and labor force will be used by all executive agencies in making decisions about allocations among governments.

OMB Circular A-46, Exhibit I, dated June 6, 1975, sets the standard for data on population to be used by all executive branch agencies in formula grants that use this factor. It states that such data must "refer to the same point or period of time for each class of government. The data on total population shall be the most current and comprehensive published by the Bureau of Census except when the entitling legislation mandates the use of decennial census data. The data currently in use are Bureau of the Census estimates of total population for July 1, 1973. The Bureau is currently working on comprehensive estimates for the years 1975 and 1976.

This has an important implication for local decision-makers who are considering a special census or survey to update total population estimates. The results of any such special statistical activity will not automatically be substituted for the data currently used by Federal agencies even though the Bureau may endorse the final product. Population changes identified in such an effort may, however, be reflected in revised Census Bureau estimates. This OMB standard affects some 56 formula grant programs which in FY 1975 involved the obligation of $30.3 billion.

OMB Circular No. A-45, Exhibit J, dated December 22, 1975, deals with the provision and use of standard data or statistical estimates of labor force and unemployment. It requires that executive branch agencies "shall use the most current national, state, or local area labor force or unemployment data published by the Bureau of Labor Statistics, U. S. Department of Labor, with respect to all program purposes, including the determination of eligibility for and/or the allocation of Federal resources requiring the use of such data, unless otherwise directed by statute. In order to main equity among local areas, comparable data series are to be used for all program purposes."

OMB has not established similar requirements for standard use of data on population characteristics such as age, race, or income because of the lack of agreement on the theoretical capacity of existing techniques to produce comparable figures nationwide.

There are a number of current federal activities directed at producing the local statistics needed for formula grant programs. These include Census Bureau efforts to produce the estimates of total population and per capita income for all local units of governments as required under the Revenue Sharing Act. These include efforts by HUD statisticians to produce data on families by place of work and on median income. Two methods are used to develop the family characteristic information. The first involves a massive retabulation of 1970 census to yield data on families in terms of the principal wage earner's place of work. The second estimate uses a 10% sample of 1975 Social Security Administration data in conjunction with Internal Revenue Service to derive parallel estimates.

Review of Federal Data Requirements

There are two examinations of federal data requirements underway which may be of interest to local officials.

The first is a joint HEW-Census Bureau project which is being carried out by the HEW Region VII Planning and Evaluation staff. The Social Economic and Demographic Data System project focuses on the social, economic and demographic requirements of eight HEW programs - Community Development/Head Start; Rehabilitation Services and Facilities/Basic Support; Adult Education; Civil Rights Technical Assistance and Training; Family Planning Projects; Community Health Centers; AID to Families with Dependent Children; and the Work Incentive Program. It has reviewed program requirements both in terms of what is mandated and what is in implied legislative, regulatory and program directives.

It has examined data currently generated by Census Bureau, Bureau of Labor Statistics, and HEW Statistical Centers in terms of data availability in relation to data requirements and data compatibility with program needs. And finally, project staff have identified the information technology needed to make such data more available to decision makers. Reports are available on data requirements, data availability and information technology needs. A report in Spring, 1977, will conceptualize a detailed implementation plan for the eight target programs in all HEW regions and for expansion to other program areas. A final decision as to whether to implement the plan has not yet been made.

In November, 1976, ICMA and six other public interest groups initiated a project to assess the impact of federal reporting requirements on state, regional, county and municipal governments and to develop recommendations on problem solutions. The project is being coordinated by the Academy for Contemporary Problems and is funded by the Commission on Federal Paperwork.

The first phase of the project involved asking local officials to identify problem areas. Half of those (50) responding to an ICMA-circulated questionnaire identified the Community Development Block Grant Program as the Federal program with which their jurisdiction had the greatest difficulty in meeting paperwork and reporting requirements. Twenty-five percent of the jurisdictions cited either EDA, EPA or CETA Programs as areas of difficulty. A second phase of the project is being considered which would examine the actual local costs of meeting federal paperwork and reporting requirements for the four programs in three communities.

Efforts to Assist Local Governments

The Census Bureau has taken a number of steps to make its data more usable at the local level. These activities include: an expanded publication program for the decennial consuses, publication of data in new formats, making computer tapes available to the public, the establishment of permanent user-oriented facilities within the Census Bureau and setting up an intensive conference, seminar and workshop program.

HUD has provided support for municipal information systems and research in areas of interest to local government. Last year HUD purchased R. L. Polk data, Profiles of Change, for a number of cities. This data enumerates changes in housing and population characteristics for a jurisdiction as a whole and by small areas. HUD has also sponsored the publication of handbooks.

An interesting example of a specific inter-agency cooperative effort is the package of materials developed jointly by the U. S. Department of Labor (Manpower Administration) and the Bureau of Census. These materials were designed to assist state and local manpower planners in the preparation of Comprehensive Manpower Plans. They include a summary of manpower indicators data package and a two-volume handbook series. The latter is designed to assist local users of manpower data by identifying published statistical series, describing alternative methods of analysis, and discussing problems likely to be encountered by users of such data.

Plans for the 1980 Census

Since 1974, representatives of the U. S. Census Bureau have been meeting with a range of public and private officials to get their views on what changes should be made in the 1980 census. The Bureau is placing emphasis on ways to improve coverage of population and produce population estimates for counties, cities and their sub-areas more rapidly. One goal is to produce final population estimates for these areas within eight months of the April 1 census date. Two important changes in procedure are also being considered which ask questions on income and Spanish origin of all respondents, rather than a sample of respondents.

The Mid-Decade Census

Public Law 94-521, which was signed in October, 1976, provides for a mid-decade census of population in addition to the decennial census. The first such mid-decade census will be taken on April 1, 1985. Subsequent mid-decade censuses will be taken every ten years thereafter.

In general, information from the mid-decade census when comparable and more current than the most recent decennial census will be used in the administration of programs established under federal law. There are two important exceptions. The mid-decade census will not be used for the apportionment of representatives to Congress, or for the allocation of federal funds when the enabling legislation specifies data from the most recent decennial census.

Public Law 94-521 gives the Census Bureau latitude to use sampling techniques in the mid-decade census. This could limit the utility of some of the data for small area analysis. The law also requires, to the extent feasible, annual production and publication of current data or total population and population characteristics for each state, county and other local unit of government with a population of 50,000 or more. Biennial data is required for other local units of government.

Local Activities

Estimates Based on Local Surveys

A number of local governments conduct their own surveys to gather current data as the basis for estimating changes in population, housing and other characteristics.

Included below are some noteworthy examples:

- Dallas conducts an annual sample survey of households. This is designed primarily to measure citizen satisfaction with city services but also provides basic information on demographic and housing characteristics. Dallas reports that as a result of this effort the problem of updating the census is "minimal" for the jurisdiction. Dallas has, however, found that some "federal agencies are reluctant to accept the validity of locally-prepared data".

- Detroit has a continuing cross-section sample survey which provides reliable information on a city-wide basis and for major geographic and population sub-groups. The city cannot afford to expand the sample to the size site required to get accurate information at the census tract level.

- The District of Columbia reports considerable satisfaction with the results and the methodology used to conduct a rent survey by telephone. They found that random-digit dialing markedly improved sample design and the ease of conducting the survey. While the original decision to conduct the survey by telephone was made on the basis of expediency and cost, response rates were higher than one would expect from a mail or personal interview survey.

Estimates Based on Administrative Data

Many jurisdictions utilize data already collected by field agencies or commercial groups to derive updated estimates of population, housing stock, etc. Common sources for such data are school records, assessment files and building permit records.

Included below are some examples of such use by large urban governments:

- Denver uses its land use information system to obtain information on housing characteristics. Local officials report that by applying known rates of household size to land use information and incorporating other administrative data such as vital statistics and school enrollment figures, it is possible to make annual population estimates with a "relatively high degree of accuracy". Additional characteristics of population such as race and income are done on a ratio basis.

- Detroit has developed a methodology for estimating housing stock which uses records of building permits, HUD-owned

structures and dangerous and abandoned buildings. They say this provides a reasonably accurate statement of changes in the number of housing units at the census tract level.

- Seattle develops total population estimates using a "building permit - vacancy rate" approach. Population by race is estimated from school attendance figures. Population by age and sex is estimated with modified cohort - survival techniques. Other population characteristics are estimated using R. L. Polk data.

Estimates Based on Multiple Sources

Few jurisdictions are able to meet their full data needs with just survey data or administrative data. Several of the jurisdictions already cited use both approaches. An interesting example of multiple approach to meeting data needs is San Diego which reports seven approaches to updating census information. These include:

- Maintenance of a current land use inventory
- Preparation of current population estimates based on occupied housing data, school enrollment and vital statistics
- A special mid-decade census in 1975
- Random sample surveys
- Contracts with private firms.

San Diego, however, reports major problems in handling this quantity of data, allocating sufficient financial resources, and maintaining the staff required to update the information on a continuing basis.

Research and Development Activities

A Model for Neighborhood Population Estimates

With support from the National Science Foundation, Rand Corporation staff have developed a method to up-date neighborhood population figures using vital statistics data tabulated by a city health department. Vital statistics are not used in the traditional way to reconstruct the demographic components of change in the population. Instead, the known number of vital events is used to estimate the population which generated these events.

New Methodology for Population Estimates

The Census Bureau has developed and tested a new technique for estimating total population of units of local government. This technique estimates total population by using individual federal income tax returns to estimate net migration rates. The Bureau is also working on estimates of per capita income for these same units of government. In conjunction with HEW, the Bureau is testing methodology for making estimates of the number of poor children. Results of a survey of income and education which is in the field now, will be contrasted with estimates obtained through the use of surrogate data. The initial focus is on state data, but the intent is to develop techniques for sub-state area estimates. The Bureau recently conducted a survey of more than 500 local agencies which make population estimates. The Bureau has three task forces analyzing the available technology for making population estimates and projections by age, race and sex. Another census task force is exploring techniques to improve the enumeration of hard-to-count populations.

Predicting Neighborhood Change and Inter-Area Migration

HUD is supporting research on predictive modeling at the MIT-Harvard Joint Center for Urban Studies. The work involves two projects: modelling efforts to predict neighborhood demographic change and inter-area migration among multi-county groupings. The study covers six metropolitan areas and some 315 multi-county groupings. Data from the Social Security Administration, Bureau of Labor Statistics, and Dun & Bradstreet are being used in the model to update census materials.

Trends Alert

With support from a number of private and public agencies, the Washington Center for Metropolitan Studies designed and conducted an area wide sample survey to update census housing and population data. The survey instrument was patterned directly on the 1970 census in order to maximize comparison with census data. Results of the survey were presented with 1960 and 1970 U. S. census data to permit comparison of the trends from 1960-1970 and 1970-1974. The Washington Center is currently preparing a methodology handbook under a contract with HUD

IV. POTENTIAL RESEARCH INITIATIVES

The problem of updating census information for local government use is a complex one. Moreover, it is an area where there is no clear-cut urban perspective on priority needs for information and improved methodology. Clearly, more efforts are needed to determine these priorities. However, discussions with officials in large urban jurisdictions suggest a number of potential areas where research initiatives may be appropriate. Four of these are described below:

- All local governments need more current information on broad population and housing trends than any national census can provide. Three local government approaches to meeting this need through sample surveys were cited in this paper. HUD is supporting the preparation of a handbook for local government use which builds upon the experience of the Washington Center for Metropolitan Statistics. A decision to concentrate in this area might identify a further need for new methodology, greater field testing of existing methodology, wider dissemination of information in workshops and conferences, or direct technical assistance by the Census Bureau.

- The emerging emphasis in delivering municipal services at the neighborhood level has made the need for small area statistics more acute. The gap between decennial censuses and current plans to use sampling in the mid-decade census means that alternative courses of statistics must be utilized. The DIME file developed by The Census Bureau has enormous utility for linking census information with administratively-generated data. However, large jurisdictions express considerable concern about its current utility. In order to utilize and maintain the DIME file, these jurisdictions need significant support in making the file operational at the local level and in developing applications to increase its usefulness. Equally important is the need for further review and dissemination of information on local government approaches and experiences in utilizing administratively-generated or commercially-produced data. Of particular interest are the more modest land-use information systems and manual geocoding and use of geocoded materials.

- Local governments have a particular need for improved information

on certain special segments of the population. A decision, for example, to focus on low income population would certainly involve a more extensive review of local efforts to improve the methodology for estimating the number of poor children. It might involve changes in existing national surveys, tests of surrogate data and a review of alternative approaches to using local data.

- The shift of resources and planning responsibilities to local governments under the "new federalism" has increased local governments needs for certain specialized statistics in particular program areas. Sometimes the impetus for developing particular series flow from federal program requirements like those incorporated in HUD's Housing Assistance Plans. A decision to focus on meeting a particular program's information needs might identify a need to reexamine federal data requirements and data productions, a need to supply additional resources (technical and/or financial) at the local level or a need to develop supportive materials like workshops or handbooks.

V. INFORMATION RESOURCES

Organizations and People

Municipal Planning Office
District of Columbia
Room 645
1329 E Street, N. W.
Washington, D. C. 20004
Contact: Nathan Levy (202)629-5011 (For information on D. C.'s telephone surveys)

International City Management Association
1140 Connecticut Avenue, N. W.
Washington, D. C. 20036
Contact: Thomas Thorwood (202)293-2200 (For information on ICMA's survey of federal reporting requirements)

Data Coordination Division
Planning Department
City of Detroit
801 City-County Building
Detroit, Michigan 48226
Contact: Patricia Becker (313)224-6389

User Training Branch
Data User Services Division
Bureau of the Census
U. S. Department of Commerce
Washington, D. C. 20233
Contact: Mathilda R. Bowman (301)763-5512 (For information and referrals to subject specialists)

Office of Planning and Evaluation
HEW, Region VII
Room 607, Federal Building
601 East 12th Street
Kansas City, Missouri 64106
Contact: Timothy Wilson, Asst. Director (816)374-5081 (For information

on SEDS project)

Office of Policy Development and Research
U. S. Department of Housing and Urban Development
451 7th Street, S. W.
Washington, D. C. 20410
Contact: Feather O'Connor (202)755-5537 (For information on Trends Alert Project)
Stevenson Weitz (For information on Neighborhood Change and migration Projects)

R. L. Polk Company
Urban Statistical Division
431 Howard Street
Detroit, Michigan 48231
Contact: R. S. Hanel (313)961-9470

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